Report

I will be dealing with a data-driven exploration of the hospitality industry. In the dataset, our goal is to develop a database for analysing and visualizing hotel booking data. I will carefully analyse the hotel dataset to answer three key business questions. Which are:

1. Revenue Growth: Examining if our revenue grows annually?
2. Parking Lot Size: Evaluating the need for expansion?
3. Trend Analysis: Identifying prevailing trends in the data? although it's a board question but very important for analysis.

My structured approach involves carefully exploration, detailed cleaning, insightful analysis, and captivating visualization using Power-BI, Initially, I observed that the total revenue for the dataset was not provided, necessitating its calculation in SQL. Through this method, I aim to provide actionable insights for the stakeholders of the hotel help them assess performance and identify areas for enhancement in the hotel

1. Exploration and Understanding: I explored the dataset in order to gain insights into its structure and potential relationships. This involved examining data distributions, identifying missing values, and understanding the range of values for each variable.
2. Build a database: by uploading excel sheets to create a database in SQL.
3. Develop SQL queries: SQL queries were employed to clean the dataset, ensuring consistency, accuracy, and completeness of the data. This step involved linking the different years, creating essential columns such as total nights and total revenue, as well as conducting query calculations for the essential columns, removing duplicates, and standardizing formats to facilitate further analysis.
4. Connect The SQL Database to Power BI: The cleaned database was exported and connected to Power-BI, for preparation visualization in Power-BI and utilizing Power query, essential calculations such as parking percentage were conducted, providing valuable insights for stakeholders.
5. Integration with Power-BI: The SQL datable was connected to Power-BI for visualization purposes, enabling the creation of interactive and insightful visual representations of the data.

Based on the initial exploration, understanding of the dataset and the three questions asked by the stakeholders, The below statement will guide the analysis:

- From the hotel dataset I have two hotel types so it would be good to group revenue by hotel type.
- I would like to understand if there is a trend in guest with personal cars.
- Focusing on average daily rate and guests will be a good approach in understanding seasonality.

Visualizations

In my Power-BI dashboard, I have carefully crafted a variety of visualizations to extract and communicate key insights from my analysis:

• Revenue Insights: These visualizations provide a comprehensive overview of revenue and its influencing factors. Utilizing trendlines within bar graphs, they capture the trends over time. Additionally, cards offer a succinct summary of the overall revenue data.

• Temporal Trends: Through a dynamic bar graph, I showcase the breakdown of total revenue by hotel over time. This visualization serves as a powerful tool for stakeholders, enabling them to assess revenue growth trends and make informed decisions.

• Performance Evaluation: A detailed table presents key metrics such as revenue, total parking spaces, and the percentage of parking utilization across different years. This data empowers decision-makers to gauge parking space efficiency and anticipate future needs. Furthermore, a donut chart visually compares the total revenue generated by each hotel, facilitating quick identification of high-performing and underperforming establishments.

Interactive Filters: To enhance usability, the dashboard features interactive filters for country, hotel and a date slicer. Stakeholders can effortlessly navigate the data landscape, unlocking valuable information tailored to their needs.

Conclusion

In conclusion, while scrutinizing the parking percentage table, it's apparent that there's no clear imperative for the hotel to expand its parking space. The stagnation in parking percentage growth suggests a stable situation in this aspect. To gauge revenue growth, stakeholders can rely on the dynamic bar graph, offering a clear picture of whether the hotel's revenue is on an upward trajectory or not. Additionally, exploring the various revenue categories provides valuable insights into specific trends within the revenue stream of the hotel dataset. This multifaceted approach equips stakeholders with a comprehensive understanding of revenue dynamics, guiding strategic decisions for sustainable growth and enhanced performance.